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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/120,126	07/22/98	BAYS L	BAYS7-19-1-2

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LM01/0328

EXAMINER

MCLEAN, K

ART UNIT PAPER NUMBER

2751

DATE MAILED: 03/28/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/120,126

Applicant(s)
BAYS et al.

Examiner
Kimberly McLean

Group Art Unit
2751



☒ Responsive to communication(s) filed on Jul 22, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-23 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-23 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. The detailed enclosed action is in response to the Information Disclosure Statement and the Application filed on July 22, 1998.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al. (USPN: 5,659,715).

Regarding claim 1, Wu discloses a system comprising a memory including a plurality of memory banks (C 7, L 11-27); a first agent (system controller) adapted to access a first memory portion including a first number of the plurality of memory banks (C 4, L 58-65); and a second agent (graphics controller) adapted to access a second memory portion including a second number of the plurality of memory banks (C 4, L 58-65); wherein the first number and the second number are variable (C 7, L 11-23).

Regarding claims 2-5, Wu discloses a register for to set the number of banks accessible to the first and second agent (C 9, L 23-52).

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Regarding claims 7-9 and 11, Wu discloses a plurality of agents (system controller and graphics controller)(C 4, L 58-65); a shared asynchronous memory block accessible to each of the plurality of agents wherein the shared memory block includes a plurality of memory banks (C 7, L 1-65); a register adapted to partition the shared memory block into a plurality of partitions, each plurality of partitions being accessible by a unique group of the plurality of agents (C 9, L 23-52).

Regarding claims 20-21 and 23, Wu discloses a method comprising accessing a first plurality of memory banks from a first agent (C 4, L 58-65); accessing a second plurality of memory banks from a second agent (C 4, L 58-65); and repartitioning the shared memory on the fly (C 7, L 11-23).

4. Claims 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes (USPN: 5,784,582).

Hughes discloses providing a memory access clock signal (Figure 2, Reference 60); firstly accessing the shared memory from a first agent based on the memory access clock signal (C 6, L 39-57; C 7; C 3, L 25-28); secondly accessing the shared memory from a second agent based on the memory access clock signal (C 6, L 39-57; C 7; C 3, L 25-28); wherein the step of secondly accessing the shared memory follows the step of firstly accessing the shared memory without a wait state therebetween (C 3, L 14-21; C 6, L 39-57; C 7).

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Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (USPN: 5,659,715).

Regarding claim 6, Wu discloses the limitations cited above in claim 1, however, Wu does not explicitly disclose a first and second agent as a digital signal processor. However, digital signal processors are known in the art for their use in high speed data manipulations used in audio, communications and other data acquisitions. Wu teachings provide an efficient way of dynamically allocating memory for two different functions. Clearly it would have been obvious to one of ordinary skill in the art to add a digital signal processor to the teachings of Wu for use in a system requiring high speed data manipulations for the desirable purpose of efficient memory usage.

Regarding claims 10 and 12, Wu discloses the limitations cited above in claim 1, however, Wu does not explicitly disclose a SDRAM. Synchronous memories are well known in the art for operating at high speeds thus decreasing the bottleneck in computing systems associated with

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slow memory devices. Therefore it would have been obvious to one of ordinary skill in the art to use a SDRAM in Wu's system for increased speed and improved performance.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zuravleff et al. - USPN: 5,630,096 - synchronous DRAM

Farmwald et al. - USPN: 6,035,365 - dual clocked synchronous memory

Proebsting - USPN:5,939,919 - clock signal distribution

Bonella - USPN: 5,333,293 - multiple input frequency memory

Takasugi - USPN: Re.35,723 - synchronous memory

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly McLean whose telephone number is (703) 308-9592 (e-mail address: Kimberly.McLean2@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9000.

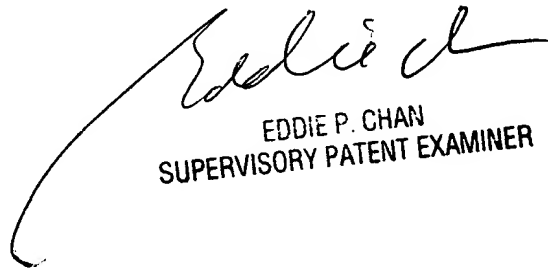
Any formal response to this action intended for entry should be mailed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 or faxed to (703) 305-9051 and labeled

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"FORMAL" or "OFFICIAL". Any informal or draft communication should be faxed to (703) 305-9731 and labeled "INFORMAL" or "UNOFFICIAL" or "DRAFT" or "PROPOSED" and followed by a phone call to the Examiner at the above number. Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

KNM

March 22, 2000



EDDIE P. CHAN
SUPERVISORY PATENT EXAMINER